

THE CANADIAN NATIONAL TOURISM INDICATORS : A DYNAMIC PICTURE OF THE SATELLITE ACCOUNT

by Jacques Delisle¹

Abstract: Canada's National Tourism Indicators are a set of statistics that provide historical and current quarterly analysis of tourism, covering tourism commodity supply and demand, employment and prices. The Indicators are based on the work done in developing the Canadian Satellite Account. This article provides an overview of the Indicators: their raison d'être, their uses, the underlying methodologies, the quality of the estimates, benchmarking to the Satellite Account, and production operations. The final section looks at future developments affecting the Indicators.

Introduction

The field of tourism statistics in Canada was marked by a number of events in the 1990s. Three of them in particular made a significant contribution to the development and fine-tuning of instruments for measuring tourism: the International Conference on Travel and Tourism Statistics, held in Ottawa in 1991; the 1994 publication of Tourism Satellite Account (TSA) estimates; and the inaugural release of the National Tourism Indicators in 1996.

This article provides an overview of the National Tourism Indicators (NTI) of Canada, including their rationale, their uses, the underlying methodologies and production operations. Section one explains the circumstances that led to the creation of the NTI. Sections two and three contain a brief description of the Indicators' contents and uses. The methodological approach used to derive the estimates and its underlying concepts are summarized in section four. The quality of the estimates and the benchmarking of NTI data to the TSA are covered in sections five and six respectively. Section seven will be of special interest to managers since it deals with the operational aspects of producing the estimates. The final section addresses the future developments that are planned for tourism statistics in Canada.

1. The rationale behind the National Tourism Indicators

When Canada's Tourism Satellite Account (TSA) was published in 1994 for the 1988 reference year, it was greeted with much enthusiasm by the various participants in the tourism community in Canada and even in other countries. For the first time, the economic importance of this hybrid industry could be measured with precision and a high degree of detail and credibility. In addition, the TSA provided a yardstick that made it possible to compare the tourism industry with all the other industries in the national economy. Subsequently, the TSA also contributed to the development of various extensions and refinements.

Keeping the TSA current has always been hindered by the unavailability of data. For example, the input-output tables, on which the TSA estimates rely to a large extent, are not available in Canada until

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three years after the end of the reference period. The complexity of the calculations, due to the high level of detail required, also stands in the way of more frequent updating.

The tourism industry nevertheless needed more current data, more frequently available tools to track industry trends for analysis, planning, management and promotion purposes. In addition, analysts wanted to be able to quantify and understand the tourism sector's behaviour over time, especially following shifts in market conditions. In response to this requirement, Statistics Canada, in partnership with the Canadian Tourism Commission, developed the National Tourism Indicators (NTI), which provide current figures on and analysis of tourism in Canada. The Indicators benefited from all the work done in establishing and developing the TSA, a prerequisite to their creation. In fact, the NTI can be regarded as an extension of the TSA.

2. What the National Tourism Indicators consist of

The NTI provide quarterly and annual estimates of most components of the Canadian TSA for the period from 1986 to the present.² They are composed of more than 300 time series on tourism demand in Canada (including both domestic demand, i.e. tourism by Canadians, and exports, i.e. tourism by foreign visitors), supply of tourism goods and services, and direct employment generated by tourism activity.

The NTI information is presented in six sections containing about 20 statistical tables. The first section includes three tables covering total tourism demand in Canada. The data are broken down into four major tourism categories of product (transportation, accommodation, food and beverage services and other tourism goods and services) and one major non-tourism category. Various totals are added to these categories. Expenditures for the four tourism categories are also disaggregated into various components, such as passenger air transport, hotels, motels, meals from accommodation services, and travel agency services. Each of the three tables contains a total of 25 rows. In addition, three different versions of the estimates are provided: seasonally adjusted at current prices, seasonally unadjusted at current prices, and seasonally adjusted at 1992 constant prices.

Sections two and three contain three tables each, one set covering domestic demand and the other set tourism exports. Domestic demand comprises the expenditures of Canadians travelling in Canada and the domestic portion of travel by Canadians to other countries; the latter includes the cost of travel agency services and the cost of flying to a foreign destination on a Canadian airline. Tourism exports – i.e. non-resident demand – refers to the expenditures of foreign visitors to Canada, such as the price of tickets purchased from a Canadian airline outside the country for a flight to a Canadian destination. The level of detail and the available versions of the estimates are the same as in section one.

Section four of the NTI information contains a 23-row table of figures on the domestic supply of tourism goods and services, i.e. the total production in Canada of tourism goods and services that are produced primarily by tourism industries. Since visitors are not the only ones who buy tourism commodities, supply is greater than tourism demand. For example, visitors consume only a small proportion of food and beverage services, most of them being for local consumption. As in the case of total demand, three different versions of the estimates are provided.

Quarterly and annual estimates of tourism employment are presented in section five, in both seasonally adjusted and unadjusted forms. The figures provided, by tourism and non tourism industries, are at a slightly higher level of aggregation than in previous sections (15 components instead of 25).

The final section contains six tables of tourism-related statistics: number of international travellers, receipts and payments in the travel account of the Canadian balance of payments, various exchange rates, consumer price indexes for various countries, implicit price indexes for tourism goods and services (based on the expenditure data from tables in previous sections) and a few general indicators (GDP, business-sector employment).

To better serve the user, the NTI information is available in various forms. There are two versions of the print publication, one containing historical data and the other, current data. Statistical information

² The fourth quarter of 1998 is the most recent reference period for which data are available.

is also available in electronic form (on diskette, from the central database, or from web sites³) and can be downloaded into any spreadsheet package for use in the preparation of statistical analyses or charts.

3. What they are used for

The estimates in the NTI can be used in three general ways: (a) to assess the current state of tourism in Canada; (b) to analyse the development of tourism in Canada in terms of trends and structures; and (c) to support policy and strategy decisions.

3a. The current state of tourism in Canada

The most recent data on tourism in Canada are estimates for the fourth quarter of 1998, published in March 1999, 90 days after the end of the reference period. The highlights of tourism supply and demand, tourism-related employment and prices of tourism goods and services are as follows:⁴

- ◆ Total tourism expenditures in Canada were 9.3 billion Canadian dollars (CAN\$), up 7.0% from the fourth quarter of 1997. Only for comparison, these expenditures represent 4.1% of the gross domestic product (GDP) for the whole economy⁵.
- ◆ Expenditures by non-residents (or tourism exports) were the leading source of total expenditure growth, climbing more than 12% to CAN\$2.4 billion.
- ◆ Domestic tourism demand (spending by Canadians in Canada) accounted for about CAN\$6.9 billion, up 5.3%. The increase was due to a decline in travel to other countries and the generally buoyant national economy.
- ◆ In the fourth quarter of 1998, tourism activities generated 513,000 jobs. Transportation posted the largest gain (3.7%).
- ◆ The prices of tourism goods and services were up by 1.7% compared to last year fourth quarter.

The Indicators show the relative importance of tourism markets in Canada, what percentage of activity is accounted for by each component of tourism demand, and which components are benefiting most from its industrial growth.

3b. Analysis of industry trends and structures

The NTI can be used to support research on the trends, cycles and quarterly patterns in various tourism aspects or the industry as a whole. Comparisons can be drawn with other industries or the national economy. The NTI estimates adjusted for seasonal variations and inflation are especially useful for this kind of analysis.

The NTI can also be used in the temporal analysis of relationships between different variables and the demand for or supply of tourism goods and services. Such variables include the exchange rate, inflation, disposable income, marketing expenditures, introduction of a new tax, government policies and major events. The NTI can be combined with information from the Satellite Account to establish benchmarks for various years, and the results can be used in structural analyses of the Canadian tourism industry.

In fact, based on a recent study⁶ using NTI data for a ten-year period (first quarter 1986 to fourth quarter 1996), the following were found: (i) tourism is a growth industry, as tourism spending rose faster than Canada's gross domestic product; (ii) job creation in the tourism industry was higher than in the business sector as a whole; (iii) tourism experiences spectacular ups and downs both cyclically and seasonally; (iv) many tourism goods and services are very sensitive to cyclical fluctuations in the country's GDP, especially in the air transportation, recreation and entertainment, travel agency, and food and beverage service industries; (v) cyclical variation in Canada's GDP accounts for a very small part of the variation in non-resident demand, which depends primarily on the economic situation in other countries, the value of the Canadian dollar, and specific events.

³ Statistics Canada's web site is at <http://www.statcan.ca> and the Canadian Tourism Commission's site is at <http://www.canadatourism.com>.

⁴ The data are in current dollars and are not seasonally adjusted.

⁵ This comparison is only done to give to the reader an idea of the size accordingly to the one who are unused to the value of the Canadian dollars. It is necessary to understand that the business expenditures, included in the tourism demand, are excluded from the GDP since they are considered an intermediate input.

⁶ For more information about the findings of this study, see Wilton (1998).

3c. Input to policy or strategy decisions

Political and tourism industry leaders may use the NTI as a basis for making decisions on policy or strategy development. Information about tourism's importance, growth and dependence on economic cycles will help decision-makers anticipate the industry's reactions. They will then be able to alter or fine-tune their plans to reflect these new factors. The utilisation of the results by the Canadian Tourism Commission in its strategies is a concrete example of the use of the NTI.

In summary, the National Tourism Indicators provide an overview of tourism in Canada, including its importance and impact. Regular updates in the data ensure that we have a dynamic picture of the industry.

4. Overview of concepts, definitions and methodology

This section provides only a brief summary of the concepts, definitions and methods used in computing the NTI estimates. Readers who require more details may consult the complete guide to sources and methods. The supply and demand concepts are described briefly in section two.

The Indicators generally follow the concepts and definitions used in the TSA, which in turn are based on the System of National Accounts concepts and definitions. The central concept of the NTI, tourism, is similar to the one adopted by the World Tourism Organization and the United Nations Statistical Commission, in that it refers to activities outside a person's usual environment. In Canada, "usual environment" is anywhere within an 80-kilometre radius of a person's residence. Travel to a place in Canada that is within 80 kilometres of one's home is not tourism. However, crossing a border into another country is usually considered to be travel outside one's usual environment.

Tourism goods and services and tourism industries are also key concepts in the TSA and the NTI. As currently defined, tourism goods and services are goods and services for which a significant proportion of total demand in Canada comes from visitors. Generally, they are identical or similar to identifiable goods and services components of the input-output accounts. Tourism industries are industries that in the absence of tourism would cease to exist or would have a much lower level of economic activity.

Where appropriate, NTI estimates are valued at market prices and therefore include sales taxes such as the goods and services tax (value added tax). The indicators of supply, demand and employment are benchmarked to the TSA levels and are projected for the years preceding and following the benchmarks. The two benchmark years in current use are 1988 and 1992.

4a. Supply indicators

The approaches developed to estimate the supply indicators use results from the input-output tables, which are based on quarterly and annual surveys of industries and their revenues (production). A different approach is used for periods not covered by the most recent survey data; in many instances, those periods extend beyond the availability period of the input-output matrices. In such cases, the indicators are projected on the basis of estimated trends using (i) results of industry component surveys or employment surveys, (ii) personal consumption expenditures on items closely related to the tourism goods and services being estimated, or (iii) industry-specific production figures (GDP).

4b. Demand indicators

Demand indicators are based on expenditure data taken primarily from three surveys of international travellers crossing the Canadian border (International Travel Surveys -ITS) and a survey of Canadian households on travel in Canada (Canadian Travel Survey -CTS).

First, income estimates used to determine the travel account balance for the Canadian balance of payments provide an overall total for non-resident demand (tourism exports). Expenditure information is collected quarterly through Customs, while international travellers entering or returning to Canada are counted monthly. Total non-resident demand is then broken down by type of expenditure using travel profiles generated during the detailed calculation of the TSA.

The estimates of domestic tourism demand are produced by a more complex method that could even be termed indirect.⁷ An annual estimate of domestic demand is computed for each tourism commodity by multiplying the ratio of tourism demand to supply, as estimated in the TSA, by the annual supply indicator estimate. The same ratio is used over several consecutive periods and is based on the most recent benchmark year of the TSA. The quarterly breakdown is calculated using CTS data. Following this phase, the estimates are recomputed to control for the effects that particular events may have had on domestic demand, and they are compared with the CTS results. Of course, this approach is not without its limitations, including the need to periodically update the benchmark data on which the ratios depend. This problem is addressed in section 6, which deals with the benchmarking of the NTI to TSA data.

4c. Employment indicators

Like the supply and demand indicators, the employment estimates are benchmarked to the TSA estimates, which in turn are based on productivity measures in the input-output tables. Household survey and census data are used to produce control totals, and business survey data are used to compute the industry-by-industry breakdown. The latter data are also used to project the quarterly estimates on a current basis.

4d. Seasonally adjusted data

Tourism is subject to large seasonal fluctuations that follow a similar pattern year after year. To help isolate underlying trends, we eliminate these regular seasonal variations with a statistical technique known as seasonal adjustment. The method involves the use of moving averages to estimate the cyclical, seasonal and irregular components of each time series; outliers and predictable working days receive special processing. Seasonal adjustment is performed at the lowest level of aggregation, and the results are summed to obtain the seasonally adjusted aggregates. This procedure has two advantages. First, doing the seasonal adjustment at the highest level of detail makes it easier to explain the seasonal variations in the aggregate figures. Second, computing the seasonally adjusted aggregates by summing detailed data preserves the system's accounting identities, which is much more convenient for users.

5. QUALITY OF ESTIMATES

Quality assessment is a difficult topic to examine in the context of the National Tourism Indicators or the System of National Accounts, given the number and variety of data sources and of methods used in their estimation. The purpose of this section is to help users better understand the Tourism Indicators and to apply them more appropriately, with a better understanding of their strengths and weaknesses.

5a. Sources of error or problem⁸

To evaluate the reliability of estimates, one must first consider the many errors to which they are subject. Some errors come from the base data, while others result from the estimation methods. Five main categories of sources of error can be identified:

- ◆ Estimates often have to be calculated before all of the surveys or censuses have been compiled or, in a small number of cases, even before any data are available. Errors can result from incorrect data entry in the case of non-responses to surveys or incorrect projections made to estimate temporarily missing data.
- ◆ Survey data can be subject to sampling errors, even after all tabulations have been completed.
- ◆ Errors can and do occur in compilation, verification, calculation or transcription when manipulating statistical information.
- ◆ The lack of consistency between the concepts of the National Accounts and tourism and of the concepts underlying the base data is a constant problem. Much of the data is intended to meet requirements very different from those of the National Accounts or Tourism. In addition, most data sources must serve other needs at the same time. There are many problems relating to definition, classification, coverage and time lag. Although adjustments are made to correct these weaknesses, they are still inevitably imperfect.

⁷ This is necessary because until recently, the time series for the Canadian Travel Survey was computed only once every two years and continuous, comparable quarterly and annual data were unavailable.

⁸ This section covers the key elements of the sources of error in the National Accounts as set out in the Statistics Canada Income and Expenditure Accounts Guide. It is directly applicable to the National Tourism Indicators.

- ◆ The seasonal-adjustment procedure can also introduce errors in estimates. Because of the very nature of seasonal adjustment, which assumes the application of centred moving averages to chronological series over long periods of time, an error in one observation of a non-adjusted series will impact previous and later observations of the corresponding adjusted series. Moreover, the adjustment procedure itself must identify borderline cases and changing seasonal trends. No method of seasonal adjustment can do this in anything other than a very approximate way.

5b. Subjective assessment of quality

One of the key aspects of quality is the accuracy of the indicators. What are the aggregates of indicators for which the estimates are considered quite good or those considered to be of a lesser quality? In principle, the characteristics of the NTI in terms of quality should be established in a rigorous manner based on the sampling bias, the deviation or any other property of the measurement error in the base data. In practice, this is an impossibility - and certainly could not be exhaustive - given the complexity of the estimation methods in question, the diversity of the base data and the absence of reliable error measurements for a good number of them.

We have adopted a subjective approach in this case using quality ratings. The scale is made of three levels⁹: 1. very reliable 2. reliable 3. acceptable

The rating “1” is given when estimates come from census, administrative documents or other very reliable sources or when the underlying concepts and definition correspond to the one developed by the TSA, or when the necessary adjustments in terms of coverage, evaluation or classification does not cause any difficulties. The rating “2” is mainly allocated for estimates based on administrative documents or not very reliable surveys or surveys demanding difficult adjustments subject to error in order to make them more in line with the TSA concept. Finally, the rating “3” shows estimates for which direct and reliable observation was impossible and that therefore necessitate a judgement or rely on parallel data sources .

In general, goods and services that make up the largest proportions of total demand have the highest quality rating, while heterogeneous classes have the lowest ratings. Transportation variables are rated “1”, whereas accommodation services, food and beverage services, and other tourism commodities have a rating of “2”. Overall, total supply of tourism goods and services is rated “1”.

5c. Revision policy to the NTI

Some users are often surprised by this need to periodically revise data, regardless of the scope of such revisions. It is a good idea to review this process. Revisions can be divided into two main categories, i.e. those of a statistical nature and those of a conceptual nature.

Statistical revisions may become necessary as a result of technical improvements, such as, an improvement in the method of collecting and compiling the raw data with a view to developing the estimates appearing in the NTI. The incorporation of new survey data not previously available may be another reason for a statistical revision. The correction of certain types of errors, such as those mentioned in the section 5a, can be another explanation.

There are reasons, other than changes in the data, why the estimates of the NTI may be periodically revised. It is sometimes desirable to introduce new concepts or definitions, to change or eliminate certain concepts used or to change the way in which certain elements are accounted for. Institutional changes or new information sources that would make it possible to translate an interesting theoretical concept into an appropriate statistical aggregate are two examples of such changes.

It should be remembered that perfect numerical accuracy is never possible, even when all of the available data have been fully analysed and exploited. That is why, when using the Indicators, the focus should not be on the actual level of the estimates, but more on the trends or evolution over time and on

⁹ The ratings are on the indicator at current prices. The quality of the estimates in constant prices depend on the quality of the estimates at current prices since constant dollars estimates are often derived by dividing the current dollars estimate by an appropriate price index. An inferior rating is applied when the current series are built using partial information or less reliable or even when conceptual or definitions problems remain in the measure.

the relationship between the different variables. It is in this broader perspective that the data should be interpreted.

In general, data are revised regularly according to the policy of the division of the System of National Accounts for other components on which they mainly depend. This policy involves one major exception that is related to the TSA itself. Since the NTI are based on the TSA, any change to the benchmark data has a direct impact on the Indicators.

6. Integration of benchmark data from the Tourism Satellite Account

As mentioned above, the NTI estimates are benchmarked to the TSA estimates. This approach – fully integrating the benchmark data – is beneficial for the following reasons: (a) it validates the projections for the years preceding and following the benchmark levels; (b) it gives credibility to the NTI both statistically and also on a conceptual basis; (c) it allows one to make a valid comparison of the two instruments. New benchmarks must be computed periodically so that the latest structural changes can be taken into account and reflected in each indicator.¹⁰ In other words, the farther away we get from the benchmark year, the greater the likelihood that the NTI will not reflect the latest shifts in market structure.

The NTI and the TSA differ in their estimation processes and the nature of the results in a number of respects. First, the NTI supply and demand estimates are not subjected to any formal, detailed reconciliation, except for the benchmark periods. Second, the projections enjoy a high degree of credibility and precision, albeit less than if they had been calculated within the framework of the TSA.¹¹ Third, any indicator is, by virtue of its structure, generally more likely than the TSA to undergo subsequent revision. The NTI undergo a complete revision whenever a new benchmark is computed or existing ones are updated. Fourth, the simplified process substantially reduces the time and effort required to derive an indicator. Lastly, only a subset of the variables present in the TSA are incorporated in the NTI, which limits the scope for analysis.

Reconciliation of the supply and demand estimates is one of the TSA's virtues, if not its greatest strength. Requiring equilibrium between supply and demand for each commodity (tourism and non-tourism) and between inputs and outputs is highly beneficial. As a result of this constraint, tourism data are consistent and cross-validated, generating then results of higher quality. The TSA provides this basic detailed structure for tourism statistics, though it does so statically. By its very nature, the TSA makes possible a detailed analysis of various data sources for both supply and demand, thus revealing their strengths and weaknesses.

There is no such thing as objective criteria for selecting a variable for use as a tourism indicator. The ultimate goal, of course, is to measure each variable that is part of the TSA. In many cases, however, that simply cannot be done, whether for methodological reasons, lack of data, or lack of financial or human resources. Three key criteria for selecting a variable are its importance and the quality and quantity of information needed to measure it. Where the information is missing, it may be desirable to phase the variable in; the gap could then be filled by introducing new data collection tools at some later stage. Another consideration is how difficult it is to develop an estimation procedure or reproduce it on a regular basis, since users need the information as early as possible after the end of the reference period. Finally, it would be helpful if other countries could develop the same kind of analytical tool as the NTI, so that comparability between countries could be used as a criterion for selecting a variable.

7. Production operations

This section covers some of the operational aspects of producing the NTI estimates. It provides a brief description of the production cycles, the partnership between the various parties, and the resources required to prepare the NTI estimates.

¹⁰ In Canada, plans call for 1996 to be the next benchmark year.

¹¹ Most supply projectors in the TSA and the NTI are of exactly the same quality for the years in which input-output tables are available since both take their data from the tables.

7a. Production and release cycles

Every effort is made to produce estimates of the Indicators that are both accurate and up to date. To achieve the second objective without overly compromising the first, preliminary estimates are released about ninety days after the end of the reference period. In comparison, estimates of Canada's Gross Domestic Product (in terms of expenditures, revenues and economic activity) and Balance of Payments are available about sixty days after the end of the reference period. Since many of the Indicators are based on these other components of the System of National Accounts, we have to wait for the release of these results before beginning the production cycle for the Indicators *per se*. That is why, by deduction, this cycle lasts about 30 days, or 22 working days.

The NTI are characterised by an iterative process. As the various data sources become available and/or are analysed by the analysts, they acquire semi-final status until they are reconciled at a later stage. This final analysis brings to light shortcomings and anomalies and provides an opportunity to make any corrections required to ensure overall consistency.

The general public knows the quarterly dates for the release of the Indicators a year in advance.¹² They can therefore plan in advance to incorporate any new estimates of the evolution of tourism in the country. Since these tourism statistics were introduced, all of the release dates have been met.

7b. Partnership

The partnership between the various stakeholders is a key element in the success of any project. The National Tourism Indicators are no exception to this rule. There is currently a positive work environment with frequent communication between the various concerned divisions of Statistics Canada, as well as between the central statistical agency and the Canadian Tourism Commission.

Statistics Canada is the federal statistical agency. Its mandate and objectives are to collect and publish statistical information on the nature and conduct of households, businesses, institutions and governments of Canada for the purposes of research, policy development, program administration, decision-making and general information. It is also required to work with other stakeholders within the framework of a broader national statistical system in order to enhance the scope, usefulness and use of that system, and to provide professional expertise and coordination services to this end.

The Canadian Tourism Commission is a national marketing organization consisting of an alliance of businesses and associations in the tourism industry, of provincial and territorial governments and of the Government of Canada. The Commission plans, directs, manages and implements programs to stimulate and promote tourism in Canada. It works to ensure that the tourism industry remains a dynamic and profitable sector of the Canadian economy.

The relationship between the two organizations can be described as a productive partnership in which the interests, goal and overall objectives of each party are well served. Both partners are therefore motivated to invest time and energy. The planning and priorities for the various research and development projects are established through ongoing communication between the two groups. In this way, the partners recognize their interdependence and the importance of the role that each plays, as well as the benefits they can draw from sharing common objectives.

7c. Financial and Human Resources

Preparing the quarterly estimates of the NTI accounts for a significant part of the total human and financial resources allocated to the Tourism Program of the National Accounts of Statistics Canada. The annual cost of producing the Indicators is close to \$CAN 300,000¹³. This part of the Program is covered by a cost recovery policy with the Canadian Tourism Commission, which, in the spirit of partnership mentioned earlier, defrays all of the operating costs incurred.

¹² For the 1999 reference year, the release dates are July 12, September 29, December 23, 1999 and March 28, 2000.

¹³ This amount does not include any of the costs associated with the collection of the information from the demand-side or supply-side surveys. Also excluded are the expenses incurred in the initial implementation of the Indicators or the Tourism Satellite Account as well as the operational costs of the other parts of the System of National Account.

The team responsible for producing the NTI (and the Satellite Account) is an integral part of the staff of Canada's System of National Accounts. This is particularly useful in that it facilitates the exchange of information on concepts, methods and information technology. The group relies on individuals with a wide range of experience and knowledge. It is a multidisciplinary team, composed of economists, mathematicians and statisticians, as well as computer technicians. Seven people are directly and actively involved in the process of producing, analysing and publishing the NTI results, although to varying degrees.

8. Future developments and conclusion

A great deal of work has already been done in developing the NTI and updating them regularly, but that is only the first step. A number of initiatives are currently under way, will begin shortly, or are planned in order to meet users' need for information about the NTI.

The immediate priority for this year is the incorporation of benchmark data from the Tourism Satellite Account into the NTI. This will make it possible to update and evaluate all the indicators and will provide a new base for projecting estimates on a quarterly and annual basis.

The Canadian system of economic statistics is currently in an important developmental phase. The introduction of new surveys and the redesign of some existing ones will help improve the quality of available information and will supply hitherto unavailable data. These changes will have a direct impact on the estimates of System of National Accounts components and consequently on the TSA and the NTI.

The recent introduction of the North American Industrial Classification System, which updates the current system and provides a uniform basis for comparisons between Canada, the United States and Mexico, will bring changes in the list of so-called tourism industries. In some cases, this will result in the emergence of additional details for tourism. Initially, these developments will affect the various surveys in the first quarter of 1999; subsequently, they will gradually filter down to the input-output tables, the TSA and the NTI.

In addition to the constant efforts to improve the current NTI production methods and find additional sources of data, there are various tourism research projects under way in Canada that will certainly have a direct, beneficial effect on the NTI. The Canadian initiative to add a regional dimension to the national Satellite Account will probably affect the NTI in the future and will unquestionably have an impact on the entire national Tourism Statistics Program. The results of a feasibility study published a few months ago indicated that extending the Satellite Account to all 12 regions is possible within the Canadian statistical system. The main constraint on this major development will be a reduced level of detail in the commodity and industry data for some small regions, due to confidentiality restrictions and data limitations. Once this solid foundation is in place, regional Indicators can be built on it.

One of the other projects that will significantly improve the NTI is the development of a Human Resources module as an extension to the Satellite Account. A recent pilot study of various aspects of employment in the transportation and accommodation industries produced conclusive results. The study focused on variables such as wages, full-time and part-time employment, and type of occupation between 1990 and 1997. Once research has been done on the remaining tourism industries and the socio-demographic characteristics of the labour market, we will be able to set the NTI employment estimates on firmer statistical and conceptual ground. It will also be possible to provide a greater level of detail than is currently available in the NTI. Such research will be used by policy makers in the field of job training.

Nearly three years after their inaugural release in 1996, there can be little doubt that the National Tourism Indicators have generally met the expectations of the tourism industry in Canada. They have provided the answers to many questions about the industry's performance and evolution. It is hoped that future developments will refine our understanding of its economic importance.

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